LTC 8600 Series Allegiant Matrix/Control Systems - Modular

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BOSCH
Invented for life

- 128 Camera by 16 monitor switching
- Modular construction
- Powerful alarm handling capabilities
- SalvoSwitching and SatelliteSwitch capability
- PC-based software package available

The LTC 8600 Series Allegiant video switcher/control systems combine both switching and computer technology to provide powerful performance and unique system features for the security user. Offering full matrix switching capability, these systems can be programmed to display the video from any camera on any monitor, either manually or via independent automatic switching sequences.

Functions

General Construction
The LTC 8600 Series provide versatile modular construction accommodating up to 128 camera inputs, 16 monitor outputs, 16 keyboards, 512 alarm points, a computer interface port, and a logging printer port.

Sequencing Capabilities
These systems can be programmed with up to 60 sequences which can be run independently of each other in either a forward or reverse direction. Any of the sequences can utilize the SalvoSwitching capability where any number of system monitors may be selected to switch as a group. Using the optional LTC 8059/00 master control software package, sequences can be made to activate and deactivate automatically based upon the time of day and the day of week.

Camera Control
The LTC 8600 Series support variable speed operation and full programming access for AutoDome and AutoDome Easy II Series cameras. In addition, on-site receiver/drivers are available to provide operator control of pan, tilt, zoom, pre-positions, auxiliaries, auto-pan, and random scan functions when used with conventional pan/tilt devices. An integral local test function is also a standard feature.
The LTC 8600 Series include an impressive user-based priority system and a series of programmable lockout tables to limit operator access of remotely controlled devices. Operators can restrict control from lower priority operators either manually or automatically. When enabled to operate automatically, a built-in time-out period is user programmable.

Bilinx® Capability
When combined with an LTC 8016 Allegiant Bilinx Data Interface unit, these switcher/controllers support operations using Bilinx communication. With Bilinx, PTZ control is accomplished using a bidirectional

communication protocol embedded in the video signal of Bosch Dinion, AutoDome, and AutoDome Easy II CCTV cameras. In addition, Bilinx uses the standard video cable to transmit alarm and status messages from the cameras, providing superior performance without the need for separate data transmission cables.

Alarm Capabilities
With the addition of the LTC 8540/00 Series alarm interface accessory units, an external contact closure or logic level can be used to automatically activate any camera to be displayed. Any monitor or group of monitors can be set to display cameras under alarm conditions. The base system contains three built in alarm response modes: basic, auto-build, and sequence and display. In addition to these three modes, the PC based software packages now includes the ability to combine any or all of the three standard modes within the same system. Alarm video may be selected to reset either manually or automatically. In addition, a 16-character alarm title can be selected to appear instead of the camera title during alarm conditions.

Programming/Software Capabilities
The LTC 8600 Series includes a black outlined 48-character on-screen display for time-date, camera number, camera ID (16-characters), an icon to identify controllable cameras, and monitor (12-characters) or status information. A user selectable option provides the ability to display a third line of on-screen text. This third line can be configured to display up to 24 additional camera title characters (40 characters total) or a 12-character monitor title.
The on-screen display is also user selectable to operate in "6-digit Camera ID" mode. When enabled, 2-digit "site numbers" are displayed in addition to the 4-digit camera number. The 2-digit site number feature is especially useful when groups of cameras are located in separate buildings, floors, or other common areas. Over 1000 characters are available when programming camera ID and monitor titles.
Utilizing a standard Windows®-based PC and the optional LTC 8059/00 Master Control Software package, enhanced programming and switching features can be obtained. A user-friendly spreadsheet format provides the ability to enter camera titles, operator names, 64 timed events, change system parameters, program camera sequences, install lockouts, and access the advanced alarm handling screens with speed and efficiency. The programmed information may then be transferred into the Allegiant system, stored on disk, or printed out directly from a printer connected to the PC.
The LTC 8600 Series contain a logging printer output port. This RS-232 serial interface can be connected to the serial port of a PC to provide a permanent record of system status showing time and date of changes such as: incoming alarms, acknowledgment of alarms, loading of sequences, user log-on to keyboard, transfer of system tables and sequences, video loss messages, and a power up reset message. In addition, lists of the system's configuration tables and sequences can be sent to the printer port. The LTC 8600 system provides powerful macro capabilities. The macros can be activated using Allegiant Series system keyboards, system time event functions, and alarm activations.

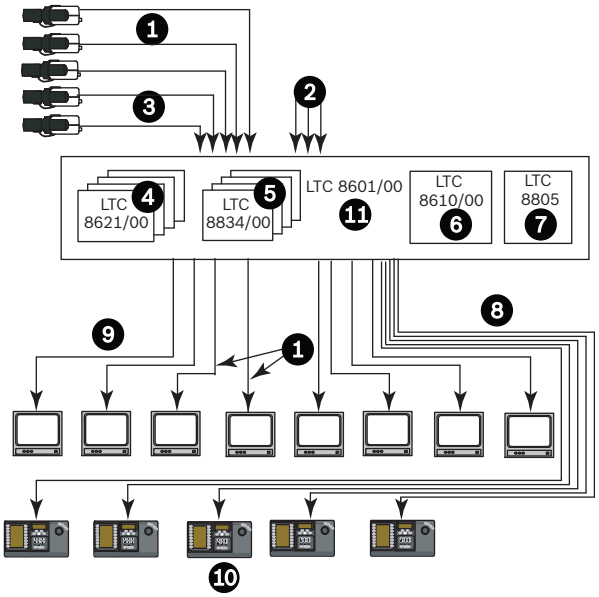
Expansion Capabilities
The LTC 8600 Series can serve as the Master Switcher in a SatelliteSwitch® configuration. This innovative SatelliteSwitch feature enables a single LTC 8600 Series system to communicate with remotely located "Satellite" systems. Any Allegiant system model can serve as a master or remote Satellite switcher. This powerful feature permits the design of a distributed matrix video switching system with control at one central location and individual control at the local sites. The main control site can view/control local cameras plus cameras located at any of the remotely distributed Satellite sites. The Satellite sites can view/control only cameras associated with their own site. When used in this type of configuration, the main LTC 8600 Series system can access up to 1024 cameras located anywhere in the system. By combining multiple Satellite systems of this type, matrix sizes of 1024 cameras by 16 monitors can be designed in an extremely reliable, "Distributed Processing" configuration.

Certifications and approvals

Electromagnetic Compatibility (EMC)	Complies with FCC Part 15, ICES-003, and CE regulations. This product also complies with EN 50121-4 railway application standards. Refer to www.boschsecurity.com website for link to applicable documents.
Product Safety	Complies with CE regulations, UL, CSA, EN, and IEC Standards

Region	Certification	
Europe	CE	LTC 8601, LTC 8801, LTC 8802)

Installation/configuration notes



LTC 8600 Series Configuration Diagram (128 Cameras by 16 Monitors)

1 Video Coax

2 Up to 64 Maximum Video Inputs

3 Additional System Cameras

4 Input Cards (max. 8)

5 Output Cards (max. 4)

6 CPU-Module

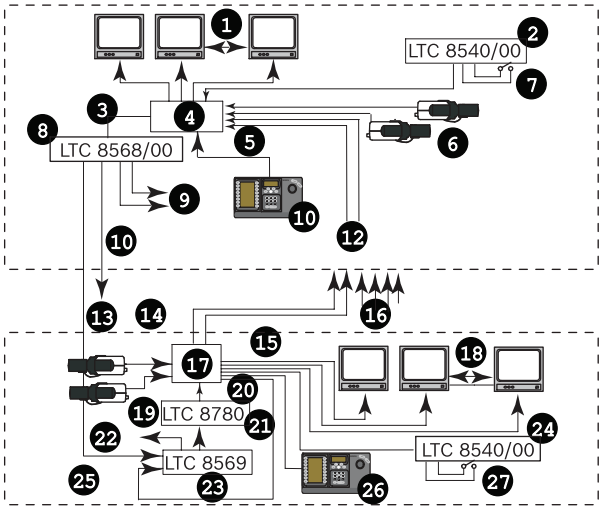
7 Power Supply Module

8 3 m (10 ft) Interconnect Cable Supplied with Keyboard

9 8 Monitor Output Capability

10 16 Full Matrix Monitor Outputs Maximum, 16 Full Function Keyboard Maximum

11 Main CPU Bay



Allegiant Satellite Switching System

1 Monitor Outputs

2 Alarm Interface Unit

3 Pan/Tilt/Zoom and Satellite Control Data

4 Allegiant Main CPU Bay

5 Inputs Used for Both Local and Trunk Lines

6 Local Camera Video Inputs

7 Alarm Inputs May Activate Either Local or Satellite Video on Main Control Center's Monitor

8 Signal Distribution Unit

9 To Any Local PTZ Camera Sites

10 Up to 1.5 km (5000 ft) Using 1 mm² (18 AWG) Shielded Twisted Pair (Belden 8760 or Equivalent)

11 Allegiant Keyboard controls any local or remote camera on any local monitor (Video and PTZ)

12 Multiple Video Trunk Lines From Each Remote Satellite Location

14 Pan/Tilt/Zoom and Satellite Control Data

15 Monitor Outputs Used As Video Trunk Lines to Main Control Site

16 Video Trunk Lines From Other Satellite Locations

17 Any Model Allegiant Main Bay

18 Local Monitors

19 Satellite Data Line

20 Console Port Input

21 Data Converter Units

22 To Any Local PTZ Camera Sites

23 Code Merger Unit

24 Alarm Interface Unit

25 Local PTZ Control Data Line

1 One Line to Each Remote
3 Satellite System Location

2 Allegiant Keyboard controls
6 any local or remote camera on any local monitor (Video and PTZ)

2 Alarm Inputs Activate Only
7 Local Video on Local Monitors

Technical specifications

LTC 8600 Series System Specifications

Capacities	
Video Inputs	Standard: 128 Satellite configuration: 1024
Video Outputs	16
• Keyboards	16
• Alarm Inputs	512
Receiver/Drivers	Standard: 128 Satellite configuration: 1024

Electrical

Video Bandwidth (-3 dB)	12 MHz typical
Differential Gain	1% maximum
Differential Phase	2° maximum
K Factor	0.5%
Signal-to-Noise Ratio	70 dB minimum
Crosstalk (Input to Input Isolation)	–50 dB typical
Feedthrough (Input to Output Isolation)	45 dB typical
Gain	Unity ± 2% (into 75 Ohm termination)
Tilt	1% typical
Transient Protection (VIM Cards)	350 W Peak Pulse Power (tp = 8/20 µs)

Environmental

Temperature	
• Operating	4°C to 50°C (40°F to 122°F)
• Storage	–40°C to 60°C (–40°F to 140°F)
Altitude	4500 m (15,000 ft)
Humidity	0% to 95% relative, non-condensing
Vibration	3 g swept sine wave, 15 Hz to 2000 Hz
Shock	50 g, 11 ms, 1/2 sine wave

Product Regulatory Compliance

LTC 8601 Series Equipment Bay

Includes equipment rack, LTC 8610/01 microprocessor module, and LTC 8805 Series power supply.

Power

Model No.	Rated Voltage	Voltage Range	Nominal Power[1]
LTC 8601/60	120 VAC, 50/60 Hz	100 to 140	200 W
LTC 8601/50	220–240 VAC, 50/60 Hz	198 to 264	200 W

1. Power at rated voltage fully loaded.

Connectors	
Video Inputs 1 to 96	One (1) sync input, and 16 monitor outputs, BNC
Video Connections 97 to 128	Two (2), 34-pin ribbon connectors used in conjunction with the LTC 8808/00 video interconnect panel
Looping Video Connections 1-128	Eight (8), 34-pin ribbon connectors used in conjunction with the LTC 8808/00 video interconnect panel

External Accessory Interfaces

Connectors	
CONSOLE	9-pin D-type RS-232 port for external PC or control interface (Default = 19.2 k baud)
ALARM	9-pin D-type RS-232 port for Allegiant alarm accessory unit (Default = 19.2 k baud)
PRINTER	9-pin D-type RS-232 port for system logging printer (Default = 19.2 k baud)
SDA	9-pin D-type, TTL level, hi-speed control data output (Bi-Phase) for interface to Allegiant series signal distribution units (Data clock rate = 31.25 kHz)
COM PORT 1	9-pin D-type RS-485 port for external Allegiant accessory use
COM PORT 2	9-pin D-type RS-485 port for external Allegiant accessory use
KEYBOARDS	Eight (8), 6-pin RS-485 ports for Allegiant keyboard use

Equipment Rack

Size (W x D x H)	EIA 48 cm (19 in.) rack, 483 x 420 x 267 mm (19 x 16.5 x 10.5 in.)
Weight	11.1 kg (24.5 lb)

Construction/Finish	Top and bottom: steel front and sides back: aluminum
Finish	Charcoal

Microprocessor Module (LTC 8610/01)

Size (D x H)	300 x 250 mm (11.8 x 9.8 in.)
Weight	0.5 kg (1.1 lb)

Power Supply

(LTC 8805/60–120 VAC, LTC 8805/50–220-240 VAC)	
Size (W x D x H)	67 x 360 x 247 mm (2.63 x 14.2 x 9.7 in.)
Weight	5.2 kg (11.5 lb)
Indicators	One power On/Off, ten fuse alert, and one external sync LED

LTC 8621/00 Camera Input Module

Use up to eight (8) per equipment bay.

Camera Inputs	16
Size (D x H)	300 x 250 mm (11.8 x 9.8 in.)
Weight	0.41 kg (0.9 lb)

LTC 8834/00 Monitor Output Module

Use up to (4) four per equipment bay.

Monitor Outputs	4
Size (D x H)	300 x 250 mm (11.8 x 9.8 in.)
Weight	0.41 kg (0.9 lb)

LTC 8808/00 Video Interconnect Panel

The LTC 8808/00 assembly contains an interconnect panel is used to convert 32 BNC connectors into two 16-channel ribbon cable connectors. The two 16-conductor ribbon cables (LTC 8809/00), designed especially for use with video signals, are used to interconnect the video between the panel and the LTC 8600 Series system. One LTC 8808/00 assembly is included at time of shipment and is required for system video inputs 97 to 128. In addition to being used for video inputs 97 to 128, the LTC 8808/00 assembly can also be ordered as an option to provide looping capability. One LTC 8808/00 (includes panel and two, ribbon cables) is required for each group of 32 cameras.

Finish	Charcoal
Size (W x D x H)	EIA 48 cm (19 in.) rack, 483 x 42 x 44 mm (19 x 1.65 x 1.75 in.)
Weight	
• Panel	0.54 kg (1.2 lb)
• Ribbon Cables (2)	0.3 kg (0.7 lb)

Allegiant Accessories

The LTC 8600 Series accessory products provide many optional features to the base Allegiant switching systems. Accessory products include keyboards, keyboard extension kits, receiver/driver units, switcher/followers, code merger units, Allegiant Bilinx Data Interface unit, video ribbon cables, and keyboard expansion units. All accessory products are designed to be installer-friendly and compatible throughout the Allegiant series systems. See the Allegiant Accessories datasheet.

Ordering information

LTC 8601/50 Allegiant Matrix Switcher
up to 128 camera inputs, 16 monitor outputs, incl. single bay, CPU and power supply, 230 VAC, 50 Hz
Order number **LTC 8601/50**

LTC 8601/60 Allegiant Matrix Switcher
up to 128 camera inputs, 16 monitor outputs, incl. single bay, CPU and power supply, 115 VAC, 60 Hz
Order number **LTC 8601/60**

LTC 8621/00 Camera Input Module
for LTC 8601, 16 video inputs per card
Order number **LTC 8621/00**

LTC 8834/00 Video Output Module
for LTC 8600 and LTC 8800, 4 video outputs per card
Order number **LTC 8834/00**

Accessories

LTC 8805/50 Spare Power Supply
for LTC 8601/50 bay, 220-240 VAC, 50 Hz
Order number **LTC 8805/50**

LTC 8805/60 Spare Power Supply
for LTC 8601/60 bay, 120 VAC, 60 Hz
Order number **LTC 8805/60**

LTC 8601/00 Equipment Rack
(included)
Order number **LTC 8601/00**

LTC 8610/01 Spare CPU Module
for LTC 8601 bay
Order number **LTC 8610/01**

LTC 8610/00 Spare CPU Module
CPU module for the LTC 8600 Series
Order number **LTC 8610/00**

Software Options

SFT-VASA Hybrid IP - Analog/Matrix Video over IP Integration Software
Order number **SFT-VASA**

LTC 8850/00 GUI Allegiant Single User Software Package
Order number **LTC 8850/00**

LTC 8059/00 Allegiant Master Control Software
Order number **LTC 8059/00**

SFT-INTSRV Integration Server Software
Allegiant integration software package
Order number **SFT-INTSRV**

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